

CLAIMS

1. A receiver circuit (2) comprising: an antenna (4) for receiving a modulated carrier signal and a transistor (10) connected to the antenna and configured to operate as a detector of modulation of the carrier signal; characterised by a resonator circuit (12-16) connected to the transistor and configured such that the transistor simultaneously self-oscillates at substantially the modulation frequency; an oscillator quenching means (20) for periodically quenching oscillation of the transistor and means (26, 28, 30) for sensing the characteristics of the build-up of oscillation to indicate the presence of the modulated carrier signal.
2. A receiver circuit according to Claim 1 in which the oscillator quenching means (20) quenches oscillation of the transistor when the magnitude of oscillation reaches a selected magnitude and the means for sensing measures the time between quenching of the transistor to indicate the presence of the modulated carrier signal.
3. A receiver circuit according to Claim 2 in which the selected magnitude is the point at which oscillator compression of the transistor occurs.
4. A receiver circuit according to Claim 1 in which the oscillator quenching means quenches oscillation of the transistor at regular time intervals, and the means for sensing measures the magnitude of oscillation over one or more of the time intervals to indicate the presence of the modulated carrier signal.

5. A receiver circuit according to any preceding claim wherein the transistor comprises a field effect transistor (FET).
6. A receiver circuit according to Claim 5 wherein the oscillator quenching means quenches oscillation of the transistor by varying the drain source current.
7. A receiver circuit according to any preceding claim in which the resonator circuit comprises a ceramic resonator.
8. A detector receiver circuit according to any one of Claims 1 to 6 in which the resonator circuit comprises a quartz crystal.
9. A detector receiver circuit according to any one of Claims 1 to 6 in which the resonator circuit comprises a network of one or more capacitors and inductors.
10. A receiver circuit according to any preceding claim and further comprising a matching network between the antenna and transistor.
11. A receiver circuit according to any preceding claim for use with a frequency or phase modulated carrier signal and further comprising a narrow band filter for converting the frequency or phase modulated signal to an amplitude modulated signal before it is applied to the input of the transistor.

12. A wake-up detector circuit including a receiver circuit according to any preceding claim.

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